

REMARKS

This amendment is responsive to the Office communication dated July 21, 2009, provided in reply to applicant's amendment filed March 3, 2009. The Office communication alleged that applicant's March 3, 2009, amendment was not fully responsive in that it allegedly did not "present arguments pointing out the specific distinctions believed to render the claims, *including any newly presented claims*, patentable over any applied references." (Emphasis in original).

Claims 73 and 74 were newly added in applicant's March 3, 2009, amendment. While applicant believes the amendment was fully responsive in that applicant specifically noted the elements of the new claims and argued for allowance of the claims in view of the discussion of Claim 12, applicant desires to advance the prosecution of the present application. Therefore, applicant is submitting herewith a supplemental amendment that includes all of the amendments and arguments presented on March 3, 2009, and further expands the arguments in regard to Claims 73 and 74. This supplemental amendment is thus intended to be considered in place of the March 3, 2009, amendment.

In the Office Action mailed October 3, 2008, Claims 12-15, 29-33, 35, 36, and 39-64 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Micali (U.S. Patent No. 5,615,269). Applicant has considered the cited reference as well as the comments provided in the Office Action, and respectfully submits that the claims are in fact patentable over Micali. Claims 53-55, 57-59, and 63 have been amended for clarity to replace the term "when" with "if." Furthermore, new Claims 73 and 74 have been added. Claims 73 and 74 are independent claims directed to computer apparatus.

Applicant respectfully requests reconsideration of the claims and allowance of the application.

Patentability of the Claims

As an initial matter, the detailed portion of the October 3, 2008, Office Action appears to address the elements of Claim 12. However, none of the remaining claims are discussed.

Where the Office Action cited Micali against all of the pending claims (Claims 12-15, 29-33, 35, 36, and 39-64), it is incumbent upon the Examiner to provide a clear articulation of the basis for rejecting each of the claims. The Examiner must provide evidence that, as a whole, demonstrates the legal determination sought to be proved is more probable than not. *See M.P.E.P § 2142.*

In the instant case, where the claims were rejected under 35 U.S.C. § 103, the Examiner must provide evidence that supports a *prima facie* case of obviousness. The Supreme Court has explained that "the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." *KSR International Co. v. Teleflex, Inc.*, 550 U.S. \_\_\_, 82 U.S.P.Q. 2d 1385 (1395-97) (2007).

Silence in the Office Action as to the reasons for rejecting Claims 13-15, 29-33, 35, 36, and 39-64 cannot be taken as a "clear articulation of the reason(s) why the claimed invention would have been obvious." For at least this reason alone, applicant submits that a *prima facie* case of obviousness of these claims has not been shown. The rejection of Claims 13-15, 29-33, 35, 36, and 39-64 should therefore be withdrawn and the claims allowed.

As to Claim 12, the Office Action (page 2) alleged that Micali teaches the elements of "automatically, by a computer, checking the compatibility of fields of an active negotiation request and a passive negotiation request, including checking the compatibility of disclosure signatures associated with the active and passive negotiation requests." In this respect, the Office Action cited Col. 2, lines 25+, of Micali. Applicant respectfully disagrees.

While the cited portion of Micali indeed refers to an "enforceable agreement," it is unclear how this disclosure of Micali is relevant to the present application. At Col. 2,

lines 25-67, Micali refers to a seller reservation price (SRP) and a buyer reservation price (BRP).

This portion of Micali is repeated as follows:

1. Enforceable Agreement. Both parties reach an agreement on a price  $P$  (between SRP and BRP) whenever  $SRP < (or equal to) BRP$ , or else;
2. Proved Privacy. Each party is provided a proof that  $SRP > BRP$  that does not reveal the other's reservation price.

In a blind negotiation, if seller and buyer learn that no deal is possible (i.e., that  $SRP > BRP$ ), then they may decide to try another round of negotiating, presumably after changing their reservation prices, or they may decide to quit negotiating. In the latter case, the seller knows that no one has learned her reservation price, and thus that she can participate in future negotiations with her "bargaining power" intact. If, instead, a deal is possible, a blind negotiation may reveal the two reservation prices. Indeed, for instance, assume that the two parties agree to "split in the middle" when a deal is possible (i.e., they adopt  $P = SRP + BRP/2$  as the actual sale price). Then, after reaching agreement on a price  $P$  by means of a blind negotiation, each party can, knowing his own reservation price and the average of the two, easily compute the other's reservation price. Indeed, when a blind negotiation system realizes that  $SRP < (or equal to) BRP$ , then the system can just reveal SRP and BRP, so that  $P = SRP + BRP/2$  can be easily computed.

It should be noted that in real-life, blind negotiations are not easily obtainable. In fact, if one of the parties (e.g., the seller) makes an offer to sell at a given price, then that offer already provides valuable information about SRP. A similar problem exists when the first offer is made by the buyer. As a result, in a real-life negotiation, sellers and buyers are unwilling to make first offers. This, however, is not a problem in a blind negotiation system.

It is thus an object of the present invention to provide cryptographic techniques and systems for implementing such blind-negotiation schemes.

It is a further more specific object of the invention to facilitate blind negotiations using one or more trusted parties who either preferably do not learn BRP or SRP or, if they do, they cannot misuse such information. Such trusted parties may be actively involved in the negotiation or, alternatively, be required only when initial exchanges of communications between buyer and seller leaves one of the parties with uncertainty about the results of the negotiations.

Applicant has carefully considered the disclosure of Micali, including the portion quoted above, and respectfully submits that Micali does not teach or suggest "automatically, by a

computer, checking the compatibility of fields of an active negotiation request and a passive negotiation request, including checking the compatibility of disclosure signatures associated with the active and passive negotiation requests," as claimed in Claim 12. For example, there is no disclosure in Micali that teaches "disclosure signatures," much less "checking the compatibility of disclosure signatures associated with the active and passive negotiation requests."

Should the Office Action be relying on the seller reservation price (SRP) and the buyer reservation price (BRP) as constituting "disclosure signatures," such reliance is in error. Claim 12 specifically states that "each of said disclosure signatures indicat[es] a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party." In Micali, neither the SRP nor the BRP indicates "a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party."

The negotiation method taught by Micali emphasizes the fact that the negotiation is "blind" to the respective seller and buyer. See Col. 2, lines 7-9. A party's reservation price cannot be considered equivalent to a "disclosure level of a plurality of disclosure levels" as claimed in the present application because the reservation price (SRP or BRP) does not "specify] an amount of information that can be provided to a contra-party." Indeed, according to Micali, no information is provided to the contra-party. Each party's respective reservation price "is a secret of that party" (Col. 2, line 21) and is not disclosed.

The Office Action (pages 2-3) further alleged that Micali teaches "each of said disclosure signatures indicating a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party, and automatically, by a computer, reporting information to the owners of the active and passive negotiation requests based on at least one of the disclosure signatures," citing the Abstract of Micali, as well as Col. 10, lines 17-26, and Col. 2, lines 7+. Applicant respectfully disagrees and again submits that Micali fails to teach or suggest what is claimed.

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The Abstract of Micali reads as follows:

There is described an electronic communications method between a first party and a second party, with assistance from at least a plurality of trustees, enabling an electronic transaction in which the first party having a selling reservation price (SRP) and the second party having a buying reservation price (BRP) may be committed to a transaction if a predetermined relationship between SRP and BRP is established, but not otherwise. The method begins by having each of the parties transmit shares of their respective reserve prices to the trustees. These shares are such that less than a given number of them does not provide enough useful information for reconstructing the reserve prices while a sufficiently high number of them allows such reconstruction. The trustees then take some action to determine whether the predetermined relationship exists without reconstructing SRP and BRP. If the predetermined relationship exists, then the trustees provide information that allows a determination of the sale price according to a given formula. Otherwise, the trustees determine that no deal is possible. As used herein, "sale" is merely representative [sic] as the transaction may be of any type including, without limitation, a sale, lease, license, financing transaction, or other known or hereinafter created financial commercial or legal instrument.

While Micali teaches a feature in which a seller and buyer share their respective reserve prices with a third party "trustee" (who determines if a deal is possible), there is no teaching of "information provided to a contra-party," as claimed in Claim 12, and especially no teaching of "disclosure signatures" that indicate "a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party." It is also evident that Micali fails to teach or suggest "reporting information to the owners of the active and passive negotiation requests based on at least one of the disclosure signatures," as again, no information is reported between the seller and buyer in the blind negotiation process.

Micali's teachings at Col. 10, lines 17-26, and Col. 2, lines 7+, are also of no avail and do not support a *prima facie* rejection of Claim 12. The teachings at Col. 2, lines 7+, discussed above, do not read on the claimed invention. At Col. 10, lines 17-26, Micali provides:

Although not meant to be limiting, many of the above computations can be effected in secure hardware of by persons using such hardware or other known machines including computers. In addition, although the various methods described are conveniently implemented in a general purpose computer selectively activated or reconfigured by

software, one of ordinary skill in the art would also recognize that all methods of the present invention may be carried out in hardware, in software, or in more specialized apparatus constructed to perform the required method steps.

It is not at all clear how the foregoing teachings of Micali have any bearing on Claim 12 of the present application. Applicant submits that Micali does not support a *prima facie* rejection of Claim 12 under Section 103(a), and therefore the rejection of Claim 12 should be withdrawn.

Claims 13-15 and 39-46 are submitted as being in allowable condition, both for their dependence (direct and indirect) on Claim 12, and for the additional subject matter they recite.

Furthermore, for at least the same reasons that Claim 12 is allowable, applicant submits that Claim 29 is allowable. Claim 29 recites, *inter alia*, the elements of "automatically, by a computer, storing an order in association with a disclosure signature," and "automatically, by a computer, responding to a price inquiry in accordance with the disclosure signature of the order." Claim 29 further states that "the disclosure signature indicates a disclosure level that specifies an amount of information that can be provided to a contra-party."

Notwithstanding the citation of Col. 2, lines 25+, of Micali in regard to Claim 12, applicant respectfully submits that Micali fails to teach or suggest the above-noted elements of Claim 29.

As discussed above, the cited portion of Micali refers to an "enforceable agreement," but it is unclear how this disclosure is relevant to the present application. Also, at Col. 2, lines 25-67, Micali refers to a seller reservation price (SRP) and a buyer reservation price (BRP), but this does not teach or suggest "responding to a price inquiry in accordance with the disclosure signature of the order," as claimed in Claim 29. Further, there is no teaching or suggestion in Micali of a "disclosure signature indicat[ing] a disclosure level that specifies an amount of information that can be provided to a contra-party."

Micali specifically emphasizes that the negotiation is "blind" to the respective seller and buyer. See Col. 2, lines 7-9. A party's reservation price cannot be considered equivalent to a "disclosure level of a plurality of disclosure levels" as claimed in the present application because

the reservation price (SRP or BRP) does not "specif[y] an amount of information that can be provided to a contra-party." According to Micali, no information is provided to the contra-party and each party's respective reservation price "is a secret of that party" (Col. 2, line 21).

Applicant has also considered the abstract of Micali, as well as Col. 10, lines 17-26, and Col. 2, lines 7+, and find no disclosure that teaches or suggests the subject matter claimed in Claim 29. Applicant therefore submits that Micali does not support a *prima facie* rejection of Claim 29 under Section 103(a), and that the rejection of Claim 29 should be withdrawn.

Additionally, Claims 30-36 and 47-52 are submitted as being allowable, both for their dependence (direct and indirect) on Claim 29, and for the additional subject matter they recite.

Lastly, for at least the same reasons that Claim 12 is allowable, applicant submits that Claim 53 is allowable.

Claim 53 is directed to a computer-accessible medium having executable instructions stored thereon that, if executed, cause a computer to "automatically check the compatibility of fields of an active negotiation request and a passive negotiation request," "automatically check the compatibility of disclosure signatures associated with the active and passive negotiation requests, each of said disclosure signatures indicating a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party," and "automatically report information to the owners of the active and passive negotiation requests based on at least one of the disclosure signatures." These elements are not found in the cited art, as discussed above with respect to Claims 12 and 29. Claim 53 is therefore likewise patentable over the cited art.

Claims 54-64 are also submitted as being allowable, both for their dependence (direct and indirect) on Claim 53, and for the additional subject matter they recite.

#### New Claims 73 and 74

Claims 73 and 74, which have been added to the application, are also allowable for at least the same reasons as Claim 12.

Claim 73 is directed to a computer apparatus configured to facilitate trading. The apparatus, as claimed, includes "a computer processor in communication with a memory." As claimed, the memory "has stored therein executable instructions that, when executed, cause the processor to" undertake certain actions, including "check[ing] the compatibility of fields of an active negotiation request and a passive negotiation request, wherein checking the compatibility of fields includes checking the compatibility of disclosure signatures associated with the active and passive negotiation requests, each of said disclosure signatures indicating a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party," and "report[ing] information to the owners of the active and passive negotiation requests based on at least one of the disclosure signatures."

Claim 74 is also directed to a computer apparatus configured to facilitate trading. In this instance, the claim is written in means plus function format and is supported by the computer structures described in the specification as filed. More specifically, the computer apparatus includes "means for automatically checking the compatibility of fields of an active negotiation request and a passive negotiation request, including checking the compatibility of disclosure signatures associated with the active and passive negotiation requests, each of said disclosure signatures indicating a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party," and "means for automatically reporting information to the owners of the active and passive negotiation requests based on at least one of the disclosure signatures."

As discussed above with respect to Claim 12, Micali fails to teach the elements of "check[ing] the compatibility of fields of an active negotiation request and a passive negotiation request, including checking the compatibility of disclosure signatures associated with the active and passive negotiation requests," as recited in Claims 73 and 74. The disclosure of Micali at Col. 2, lines 25+ (cited by the Office Action in regard to Claim 12) is irrelevant in this respect. Micali may refer to an "enforceable agreement," but the relevance of this disclosure is unclear.

There is no disclosure in Micali that teaches "disclosure signatures," much less "checking the compatibility of disclosure signatures associated with the active and passive negotiation requests."

Micali's reference to a seller reservation price (SRP) and a buyer reservation price (BRP) at Col. 2, lines 25-67, is unavailing. The seller reservation price (SRP) and the buyer reservation price (BRP) do not constitute "disclosure signatures," as claimed. Claims 73 and 74 specifically state that "each of said disclosure signatures indicat[es] a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party." In Micali, neither the SRP nor the BRP indicates "a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party."

The negotiation method taught by Micali emphasizes the fact that the negotiation is "blind" to the respective seller and buyer. See Col. 2, lines 7-9. A party's reservation price cannot be considered equivalent to a "disclosure level of a plurality of disclosure levels" as claimed in the present application because the reservation price (SRP or BRP) does not "specif[y] an amount of information that can be provided to a contra-party." Indeed, as noted above, no information according to Micali is provided to the contra-party. Each party's respective reservation price "is a secret of that party" (Col. 2, line 21) and is not disclosed.

Micali also fails to teach or disclose "each of said disclosure signatures indicating a disclosure level of a plurality of disclosure levels that specifies an amount of information that can be provided to a contra-party," and "report[ing] information to the owners of the active and passive negotiation requests based on at least one of the disclosure signatures," as recited in Claim 73 and in similar language recited in Claim 74. Any reliance on the Abstract of Micali, as well as Col. 10, lines 17-26, and Col. 2, lines 7+, as cited in the Office Action in regard to Claim 12, is misplaced.

While the Abstract of Micali suggests a feature in which a seller and buyer share their respective reserve prices with a third party "trustee" (who determines if a deal is possible), there

is no teaching of "information that can be provided to a contra-party," as claimed in Claims 73 and 74. Micali's teachings at Col. 10, lines 17-26, and Col. 2, lines 7+, are also of no avail in regard to Claims 73 and 74. The teachings at Col. 10, lines 17-26, and Col. 2, lines 7+, discussed above, simply do not read on the claimed invention.

In view of the above discussion, applicant respectfully requests examination and allowance of Claims 73 and 74.

Information Disclosure Statements

Applicant thanks the Examiner for considering and initialing the reference listed in the information disclosure statement submitted August 6, 2008. Certain prior information disclosure statements, however, have not been initialed and returned by the Examiner. These include information disclosure statements submitted January 9, 2008; May 2, 2008; June 24, 2008; and March 3, 2009. Applicant respectfully requests the Examiner to initial and return these information disclosure statements to confirm that the listed references have been considered.

CONCLUSION

In view of the foregoing arguments and remarks, applicant respectfully submits that pending Claims 12-15, 29-33, 35, 36, 39-64, 73, and 74 are patentable over the cited art. Furthermore, Claim 34 should be rejoined as it depends from allowable base Claim 29.

Applicant respectfully requests that the claim rejections be withdrawn and the case be passed to issue at an early date.

Respectfully submitted,

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